<u>Amendments to the Claims:</u>

This listing of claims will replace all prior versions, and listings, of claims in the application:

<u>Listing of Claims:</u>

1.   (Currently amended): A method in a storage device for dynamically determining and adjusting a number of data blocks to be prestaged in a cache included in said storage device, said method comprising the steps of:

receiving and processing a plurality of input/output (I/O) requests by said storage device;

accumulating information about said plurality of I/O requests and said processing of future I/O requests by said storage device; [[and]]

utilizing said accumulated information to dynamically adjust a prestaging policy as said storage device receives and processes said plurality of requests, said prestaging policy defining a current number of data blocks to be prestaged in said cache[[.]]; and

wherein said accumulating information further includes determining an average number of contiguous sequential blocks accessed for each one of said plurality of I/O requests.

2.   (Original): The method according to claim 1, wherein said receiving and processing a plurality of input/output (I/O) requests by said storage device further comprises receiving and processing a plurality of contiguous, sequential input/output (I/O) requests by said storage device.

3.   (Canceled)

4.   (Original): The method according to claim 1, wherein said accumulating information further includes:

determining a percentage of previously prestaged data blocks that were actually referenced.

5.   (Currently amended): The method according to claim 1, wherein said accumulating information further includes:

determining a current utilization of said storage device drive.

6.   (Currently amended): The method according to claim 1, further comprising:

determining an average number of contiguous sequential blocks accessed for each one of said plurality of I/O requests;

determining a percentage of previously prestaged data blocks that were actually referenced;

determining an adjusted prestage count utilizing said determined average number and said percentage of previously prestaged data blocks that were actually referenced; and

utilizing said adjusted prestage count to dynamically adjust said prestaging policy.

7.   (Original): The method according to claim 6, further comprising:

determining said adjusted prestage count by multiplying said average number by said percentage of previously prestaged data block that were actually referenced.

8.   (Currently amended): The method according to claim 6, further comprising:

determining a current utilization of said storage device drive;

dynamically adjusting said prestaging policy by determining a new number of data blocks to be prestaged utilizing said current utilization and said adjusted prestage count.

9.   (Currently amended): The method according to claim 8, wherein said determining said new number of data blocks further comprises:

determining a percentage of time said storage device drive is being utilized;

converting said percentage into a fraction; and

determining said new number of data blocks by:

dividing said fraction by 0.6 to produce a first result;

subtracting said first result from 2 to produce a second result; and

multiplying said adjusted prestage count by said second result to produce said new number of data blocks.

10.   (Currently amended): A data processing system including a storage device for dynamically determining and adjusting a number of data blocks to be prestaged in a cache included in said storage device, said system comprising:

said system including a CPU executing code for receiving and processing a plurality of input/output (I/O) requests by said storage device;

said CPU executing code for accumulating information about said plurality of I/O requests and said processing of said plurality of I/O requests by said storage device; [[and]]

said CPU executing code for utilizing said accumulated information to dynamically adjust a prestaging policy as said storage device receives and processes future I/O requests, said prestaging policy defining a current number of data blocks to be prestaged in said cache[[.]]; and

wherein said CPU executing code for accumulating information further includes said CPU executing code for determining an average number of contiguous sequential blocks accessed for each one of said plurality of I/O requests.

11.   (Original): The system according to claim 10, wherein said CPU executing code for receiving and processing a plurality of input/output (I/O) requests by said storage device further comprises said CPU executing code for receiving and processing a plurality of contiguous, sequential input/output (I/O) requests by said storage device.

12.   (Canceled)

13.   (Original): The system according to claim 10, wherein said CPU executing code for accumulating information further includes:

said CPU executing code for determining a percentage of previously prestaged data blocks that were actually referenced.

14,   (Currently amended): The system according to claim 10, wherein said CPU executing code for accumulating information further includes:

said CPU executing code for determining a current utilization of said storage device drive.

15.   (Currently amended): The system according to claim 10, further comprising:

said CPU executing code for determining an average number of contiguous sequential blocks accessed for each one of said plurality of I/O requests;

said CPU executing code for determining a percentage of previously prestaged data blocks that were actually referenced;

said CPU executing code for determining an adjusted prestage count utilizing said determined average number and said percentage of previously prestaged data blocks that were actually referenced; and

said CPU executing code for utilizing said adjusted prestage count to dynamically adjust said prestaging policy.

16.   (Original): The system according to claim 15, further comprising:

said CPU executing code for determining said adjusted prestage count by multiplying said average number by said percentage of previously prestaged data block that were actually referenced.

Page 4 of 8
Hsu et al. – 10/750,101

17.   (Currently amended): The system according to claim 15, further comprising:

said CPU executing code for determining a current utilization of said storage device ~~drive~~; and

said CPU executing code for dynamically adjusting said prestaging policy by determining a new number of data blocks to be prestaged utilizing said current utilization and said adjusted prestage count.

18.   (Currently amended): The system according to claim 17, wherein said CPU executing code for determining said new number of data blocks further comprises:

said CPU executing code for determining a percentage of time said storage device ~~drive~~ is being utilized;

said CPU executing code for converting said percentage into a fraction; and

said CPU executing code for determining said new number of data blocks by:

dividing said fraction by 0.6 to produce a first result;

subtracting said first result from 2 to produce a second result; and

multiplying said adjusted prestage count by said second result to produce said new number of data blocks.

19.   (Currently amended): A computer program product for dynamically determining and adjusting a number of data blocks to be prestaged in a cache included in a storage device, said product comprising:

instruction means for receiving and processing a plurality of input/output (I/O) requests by said storage device;

instruction means for accumulating information about said plurality of I/O requests and said processing of said plurality of I/O requests by said storage device; [[and]]

instruction means for utilizing said accumulated information to dynamically adjust a prestaging policy as said storage device receives and processes future I/O requests, said prestaging policy defining a current number of data blocks to be prestaged in said cache[[.]]; and

wherein said instruction means for accumulating information further includes instruction means for determining an average number of contiguous sequential blocks accessed for each one of said plurality of I/O requests.

20.   (Currently amended): The product according to claim 19, further comprising:

~~instruction means for determining an average number of contiguous sequential blocks accessed for each one of said plurality of I/O requests;~~

instruction means for determining a percentage of previously prestaged data blocks that were actually referenced;

Page 5 of 8
Hsu et al. – 10/750,101

PAGE 7/10 * RCVD AT 3/28/2006 3:48:20 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-5/1 * DNIS:2738300 * CSID:972 385 7766 * DURATION (mm-ss):02-30

instruction means for determining an adjusted prestage count utilizing said determined average number and said percentage of previously prestaged data blocks that were actually referenced; and

instruction means for utilizing said adjusted prestage count to dynamically adjust said prestaging policy.